

DOE 1540. 1A  
7-8-92

THIS PAGE MUST BE KEPT WITH DOE 1540. 1A, MATERIALS  
TRANSPORTATION AND TRAFFIC MANAGEMENT.

DOE 1540. 1A, MATERIALS TRANSPORTATION AND TRAFFIC MANAGEMENT,  
HAS REVISED DOE 1540. 1 TO REFLECT ORGANIZATIONAL TITLE,  
ROUTING SYMBOL, AND OTHER EDITORIAL REVISIONS REQUIRED BY  
SEN-6. NO SUBSTANTIVE CHANGES HAVE BEEN MADE. DUE TO THE  
NUMBER OF PAGES AFFECTED BY THE REVISIONS, THE ORDER HAS  
BEEN ISSUED AS A REVISION.



U.S. Department of Energy  
Washington, D.C.

ORDER

DOE 1540.1A  
7-8-92

SUBJECT: MATERIALS TRANSPORTATION AND TRAFFIC MANAGEMENT

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1. PURPOSE. To establish Department of Energy (DOE) policies and procedures for the management of materials transportation activities, including traffic management, for other than intrabuilding and intrasite transfers.
  2. CANCELLATION. DOE 1540.1, MATERIALS TRANSPORTATION AND TRAFFIC MANAGEMENT, of 5-3-82.
  3. SCOPE. The provisions of this Order apply to all Elements of the Department of Energy involved in transportation activities and responsible for the payment or reimbursement of charges for transportation services.
  4. POLICY. It is Departmental policy to ensure that traffic and transportation management shall be accomplished in a manner commensurate with:
    - a. Operational requirements for transportation services;
    - b. Established practices and procedures for transportation safety, economy, efficiency, and cargo security;
    - c. National transportation policy as established by Congress in 49 U.S.C. and implemented by the Federal agencies; and
    - d. Applicable Federal, State, local, and international transportation regulations.
  5. REFERENCES.
    - a. DOE References.
      - (1) DOE. 1540.4, PHYSICAL PROTECTION OF UNCLASSIFIED IRRADIATED REACTOR FUEL IN TRANSIT, of 3-8-89, establishes physical protection requirements and standards.
      - (2) DOE 5000.3A, OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION, of 5-30-90, establishes a DOE system for identification, categorization, notification, analysis, reporting, followup, and closeout of occurrences.

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**DISTRIBUTION:**

All Departmental Elements

**INITIATED BY:**

Assistant Secretary for  
Environmental Restoration  
and Waste Management

- (3) DOE 5480.3, SAFETY REQUIREMENTS FOR THE PACKAGING AND TRANSPORTATION OF HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, AND HAZARDOUS WASTES, of 7-9-85, contains safety requirements for the packaging of fissile and radioactive material defines the requirements for the design, evaluation, and testing of containers used for the transport of the Departments fissile and radioactive materials. Also states the requirement and procedure for hazardous material exemption.
- (4) DOE 5632.2A, PHYSICAL PROTECTION OF SPECIAL NUCLEAR MATERIALS AND VITAL EQUIPMENT, of 2-9-88, defines requirements for the protection and safeguards to be employed for the transport of special nuclear materials.
- (5) DOE- 5632.1B, PROTECTION PROGRAM OPERATIONS, of 9-8-92, establishes DOE policies for the physical protection of security interests and baseline physical protection standards.
- (6) DOE 5300.3C, TELECOMMUNICATIONS: COMMUNICATIONS SECURITY, of 5-18-92, establishes policy and provides communications security guidance for telecommunications services.
- (7) DOE 5300.1C, TELECOMMUNICATIONS, of 6-12-92, establishes policies, responsibilities, and provides guidance for telecommunications services.
- (8) Standard R0T-F 8-6T, "Hoisting and Rigging of Critical Components and Related Equipment," of 1-80, defines requirements to ensure the safe handling and packaging of high value components and commodities.

b. Sources of Hazardous Material Transportation Regulations. The principal sources of Federal regulations pertaining to the transportation of hazardous materials, which includes radioactive and fissile materials, are listed below. The regulations contain provisions for classification, packaging, marking, and labeling of such materials. They are issued by the following agencies and codified and published in the Code of Federal Regulations. The regulations of each agency are published separately and may be purchased from the Superintendent of Documents, United States Government Printing Office, Washington, DC 20402.

(1) United States Nuclear Regulatory Commission Regulations.

- (a) Title 10, Code of Federal Regulations (CFR), Part 71, "Packaging of Radioactive Material for Transport, and Transportation of Radioactive Material Under Certain

Conditions, prescribes Federal standards applicable to licensee shippers of non-exempt quantities of radioactive materials.

(b) Title 10 CFR Part 73, "Physical Protection of Plants and Materials, prescribes shipment standards.

- (2) United States Department of Transportation Regulations. Title 49 CFR Parts 100-199, Subchapters A-C, "Hazardous Materials Regulations," provides requirements applicable to shippers and carriers of hazardous commodities.
- (3) United States Postal Service Regulations. Publication 52, "Acceptance of Hazardous or Perishable Articles, prescribes applicable postal regulations.
- (4) United States Environmental Protection Agency. Title 40 CFR, designates the types of hazardous materials which are regulated.
- (5) United States Customs Service Rules. Title 19 CFR and Public Law 95-242, "Import/Export of Nuclear Materials."

c. General Transportation Acts and Regulations. In addition to the preceding regulations covering the transportation of hazardous materials, there are several transportation acts and regulations, which assign responsibilities, establish requirements, and prescribe procedures for transportation in general or in other specific areas. Some of these important references are as follows:

- (1) Interstate Commerce Act. Title 49 U.S.C., authorizes the Interstate Commerce Commission to regulate rates, rules, and practices of carriers engaged in interstate commerce.
- (2) Cargo Preference Act of 1954. Title 46 U.S.C. 1241 and 49 U.S.C. 1517, states requirements governing the use of ocean transportation by Government agencies.
- (3) Federal Property and Administrative Act of 1949, as amended. (Public Law 152, 81st Congress, 63 Stat., 377) This act assigns the responsibilities for transportation services in the civil Government agencies to the General Services Administration (GSA), but recognizes certain exemptions granted the Atomic Energy Commission.
- (4) Hazardous Materials Transportation Act. Title 49 U.S.C. 1801 et seq., defines regulatory and enforcement authority of the Secretary of Transportation to protect the nation against the risks inherent in the transportation of hazardous materials.

- (5) Federal Property Management Regulations. Title 41 CFR Parts 101 et seq., prescribes the regulations on transportation and traffic management required to implement GSA's responsibilities under Federal Property and Administrative Act of 1949.
  - (6) DOE Federal Property Management Regulations. Title 41 CFR Parts 109-40, prescribes the transportation and traffic management regulations for those areas of DOE operations exempted under the Federal Property and Administrative Act of 1949.
  - (7) United States Air Force Regulation 76-38. Joint military regulation, Military Airlift - Request Submission. Retirements Submission, Space Assignment and Allocation Procedures," provides regulations governing use of military airlift.
- d. Other Related Reference Material. Several private and Governmental agencies other than those listed, have printed publications or standards which either set forth certain of the above regulations in full or in part, or provide guidance in connection with some facets of transportation of hazardous materials. Publications applicable solely to foreign commerce are also available. These publications are helpful for use in daily operations. It should be understood that some of these publications are not complete restatements of the regulations applicable to interstate or foreign commerce, and reference must be made to the Code of Federal Regulations or other appropriate authority for the actual and complete requirements applicable to the packaging and transportation of hazardous materials including radioactive and fissile materials. Some of these publications, especially tariffs, are reissued and updated periodically. Some of these publications are as follows:
- (1) "IATA Restricted Articles Regulation," published periodically by the International Air Transport Association, 1115 Mansfield Street, Montreal 113, Quebec, Canada.
  - (2) "Regulations for the Safe Transportation of Radioactive Materials, Safety Series No. 6," 1973 revision as amended, issued by the International Atomic Energy Agency; Vienna International Centre, Post Office Box 100, A-1400, Vienna, Austria. Available from Unipub, Inc., Post Office Box 433, New York, NY 10016.
  - (3) "Official Air Transport Restricted Articles Tariff and Circular," Air Transport Association of America; published periodically by Airline Tariff Publishers, Inc., 1825 K Street, NW, Washington, DC 20006.

- (4) "A Guide for Shipping Hazardous Materials," published by United Parcel Service, 51 Weaver Street, Greenwich Office Park 5, Greenwich, CT 06830.
- (5) "Hazardous Materials Regulations of the Department of Transportation by Air, Rail, Highway, Water and Military Explosives by Water, including Specifications for Shipping Containers," published periodically by the Bureau of Explosives, Association of American Railroads, 1920 L Street, NW, Washington, DC 20036.
- (6) "ATA Hazardous Materials Tariff," published periodically by American Trucking Associations, 1616 P Street, NW, Washington, DC 20036.
- (7) United States Tariff Commission, "Tariff Schedules of the United States Annotated," Superintendent of Documents, Government Printing Office, Washington, DC 20402.
- (8) United States Customs Service, "Export Administration Regulations," Superintendent of Documents, Government Printing Office, Washington, DC 20402.

e. American National Standards Institute Standards.

- (1) The American National Standards Institute prepares and publishes nuclear industry-wide standards related to the transportation of radioactive materials. Such standards reflect agreement on the part of persons who are substantially involved with the specific subject matter. Although these standards do not have the force and effect of law, they should be adhered to if they are determined to be helpful in meeting applicable regulations. Such standards should not be construed as requirements.
- (2) Copies of current standards may be obtained from the American National Standard Institute, 1430 Broadway, New York, NY 10018.

6. DEFINITIONS.

- a. Cargo Security. The physical protection against theft, pilferage, burglary, hijacking, sabotage, and vandalism of cargo and vehicles in transit. (This term includes "physical protection of cargo" and "transportation safeguards.")
- b. Carrier. Any person engaged in the transportation of passengers or property as a common, contract, or private carrier, or freight forwarder, as defined in the Interstate Commerce Act, as amended; or the United States Postal Service; or officers, agents, and employees of such carriers.

- c. Consignee. The person designated in the shipping papers to receive the shipment.
- d. Consignor. The person executing the shipping papers, and named as such in the shipping papers. The consignor is in every case a shipper.
- e. DOE Contractor. A prime contractor or subcontractor of the Department of Energy.
- f. Exclusive Use of Vehicle. A service whereby a vehicle is assigned for the sole use of a specific consignor, loaded only by that consignor, and unloaded only by the consignor or consignee.
- g. Government Aircraft. Any aircraft which is used exclusively by a Government Agency in carrying out noncommercial operations. Title 49 of The United States Code 1301(36) defines government aircraft" as follows:

"Government aircraft" means an aircraft used exclusively in the service of any government or of any political subdivision thereof, including the government of any State, Territory, or possession of the United States, or the District of Columbia, but not including any government-owned aircraft engaged in carrying persons or property for commercial purposes."

Examples of "Government Aircraft" are cited on page I-8, paragraph 12a(2).

- h. Hazardous Materials. Any material which has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce.
- i. Material. Any material, hazardous or nonhazardous, or article which requires transportation to, from, or between DOE facilities for which DOE pays or reimburses transportation charges.
- j. Package. The package, together with its contents, as presented for transportation.
- k. Packaging. The assembly of containers and any other components attached thereto, including inner receptacles, absorbent material supporting structure, thermal insulation, and supplementary attached equipment.
- l. Precious Metals. For the purposes of this Order, defined as gallium, gold, iridium, osmium, palladium, platinum, rhodium, ruthenium, silver, or any combination of these metals.



- m. Premium Transportation. The carriage of any person or commodity between two points by any method other than the most economical. When complying with all applicable laws, rules, regulations, and security requirements, transportation requirements are specific and are not considered "premium." Under certain conditions, time in transit or time required to arrive at destination precludes the use of a lower cost method for carriage and is likewise not considered "premium."
- n. Property. Goods and materials, including accountable quantities of nuclear materials, explosives, and other hazardous materials shipped by or for the account of the Department.
- o. Protective Service. Measures taken by commercial carriers upon request to provide physical protection for shipments, which is in addition to the protection furnished under the requirements of normal common carrier activity. (See DOE 5632.1B and DOE 5632.2A for additional information regarding degree of protection for property in transit. )
- p. Public Vehicle. Any surface vehicle which is either owned by or leased to a Government Agency, and which is operated by that Agency. Examples of "Public Vehicle" are cited on page I-6, paragraph 12a(1).
- q. Shipper. The person (or his or her agent) who tenders a shipment for transportation. The term includes persons who prepare packages for shipment, and offer packages to a carrier for transportation by signature on the shipping paper.
- r. Traffic Management. Involves all functional operations related to the procurement and management of commercial and Government-owned transportation services. Traffic management is responsible for carrier selection, preparation of shipments for the carrier, loading and unloading on the shipping platforms, tracing, expediting, rate analysis and applications, tariff controls, reconsignment, diversion, preparing and filing bills of lading, processing loss and damage claims, promoting claims prevention, assuring compliance with applicable laws and regulations, and all other operations related to the movement of shipments into and out of a facility.
- s. Transport Vehicle. The conveyance (motor vehicle, railcar, aircraft, barge, or seagoing vessel used for the transportation of property. Each cargo-carrying body (trailer, van, boxcar, freight container, barge, or ship's hold) is a separate vehicle.
- t. Transportation. The activity of moving traffic, materials, and persons from one point to another.

7. RESPONSIBILITIES.a. Assistant Secretary for Environmental Restoration and Waste Management (EM-1).

- (1) Develops, establishes, and promulgates directives involving systems, operational standards, procedures, criteria, and guidelines for activities relating to the transportation of the Department's property and materials.
- (2) Provides a centralized source of staff expertise and assistance on transportation and traffic management matters, the interpretation of Federal State, and local transportation regulations with the concurrence of the Office of General Counsel (GC-1), and the jurisdictional responsibilities of transportation operational and traffic management responsibilities.
- (3) Assists Headquarters and field elements in carrying out transportation, operational, and traffic management responsibilities.
- (4) Assists field elements in expediting essential shipments consigned to or by the Department, and, in concert, as required, with the Assistant Secretary for Environment, Safety and Health (EH-1), and with the concurrence of GC-1 obtains necessary waivers or exemptions from Federal transportation regulations, except for Department of Transportation (DOT) hazardous materials exemptions.
- (5) Collects and maintains data and statistics pertaining to transportation of Departmental materials and property, and, as appropriate, participates in Headquarters and field element transportation related studies.
- (6) In cooperation, as required, with EH-1 and with the concurrence of GC-1, coordinates the development and submission of Departmental requests for exemptions from Federal transportation regulations and in the formulation of protests and objections to carrier tariff proposals.
- (7) In concert with appropriate program offices, identifies the need for, and provides (as necessary) funding and recommendations for research, development, and testing related to the operational and transportation management aspects of materials transportation, except for long-range packaging R&D for radioactive materials.
- (8) In cooperation, as required, with the Assistant Secretary for Domestic and International Energy Policy (EP-1), EH-1 and other DOE program offices, and with the concurrence of

GC-1, coordinates the Departmental review of, and comment on, transportation regulations, proposed by the Department of Transportation, the Nuclear Regulatory Commission, the Environmental Protection Agency, and other international Federal State, and local agencies.

- (9) Recommends and participates in the development of policy, standards, and procedures for cargo security or in transit physical protection of strategic materials involving foreign and domestic shipments of the Department's property, coordinating with EP-1 as required.
- (10) In cooperation with EP-1, provides specific advice and assistance on international shipments with regard to processing of shipping papers, customs clearances, carrier services and routing, and other transportation related Department approval's except for IAEA statement of competent authority for foreign radioactive material shipments, which various Agencies.
- (11) Administers Departmental implementation of Federal Property Management Regulations related to traffic management functional areas (except for the Department's motor vehicle fleet, special telecommunication requirements, and those responsibilities of the Director of Administration and Human Resource Management cited in DOE 1500.2A related to household goods shipments).
- (12) Negotiates, or designates appropriate field element(s) to negotiate, freight rates, classification ratings, services, and other related matters for Departmental shipments involving more than one field element, or where the negotiation is national or international in scope.
- (13) Reviews Federal Property Management Regulations and implements, supplements, and requests class deviations.
- (14) Coordinates requests to Department of Defense for military transportation services.
- (15) Represents the Department as a member of the American National Standards Institute (N.14 Committee on Transportation) to ensure that Department transportation operational matters and policy are properly considered.
- (16) Represents the Department on the Interagency Government Tariff Modernization Committee and the Interagency Committee on Transportation and Traffic Management.

- (17) In cooperation with EH-1 and EP-1 as required, represents the Department in relations with other Federal, State, and local agencies, industry, and international committees on matters within the functional areas described above; and represents the interests of, or assists field elements in their relations with other Federal agencies.
- (18) Provides transportation guidance to field elements and appraises their performance of transportation and traffic management activities as they relate to individual programs.

b. Program Secretarial Officers (PSOs).

- (1) Carry out research, development, and testing as necessary to provide, maintain, and operate transportation systems for their programs.
- (2) Ensure that their transportation operations meet all applicable regulatory requirements and Departmental directives.

c. Director of Administration and Human Resource Management (AD-1) is responsible for the Department's transportation related to telecommunication requirements and the Headquarters transportation service requirements listed in subparagraph g, below, with respect to shipments made under contractual authorities and related to the functional activities of this office.

d. Director of Procurement, Assistance and Program Management (PR-1) develops appropriate articles for inclusion in contracts and ensures that the provisions of this Order are applied to, and included in, the DOE Procurement Regulations.

e. Deputy Assistant Secretary for Military Application (DP-20 and Deputy Assistant Secretary for Naval Reactors (NE-60)).

- (1) Ensure that the provisions of this Order are carried out by the field elements under their jurisdiction and that their transportation operations meet applicable regulatory requirements and Departmental Orders.
- (2) Develop, establish, and maintain policies, systems, operational standards, procedures, criteria, and guidelines for activities relating to the transportation of materials for their programs in a manner comparably effective with the provisions of this Order.
- (3) Coordinate requests to the Department of Defense for military transport services.

- (4) File requests for waivers and exemptions from applicable Federal, State, and local laws or regulations as needed to meet programmatic requirements directly to the enforcement agency with the concurrence of GC-1, if they so choose, or request the assistance of EM-1 in processing such requests. Requests for DOT exemptions for hazardous materials will be forwarded to EH-1.
- f. General Counsel (GC-1) shall provide advice and assistance in matters relating to statutes and regulations, and exemptions and waivers thereto.
- g. Heads of Field Elements.
  - (1) Ensure compliance with the Department's transportation policies and procedures, and Federal and international regulations in carrying out operational responsibilities for domestic and international shipments.
  - (2) Obtain waivers from State and local transportation regulatory agencies, as needed to meet programmatic requirements.
  - (3) Forward applications for waivers or exemptions from Federal transportation regulations, as needed to meet programmatic requirements, to EM-1 (with copy furnished to the cognizant Program Secretarial Officer) for coordination and submission to the appropriate Federal agency. DOT exemptions for hazardous materials are submitted for coordination to the appropriate Federal agency by EH-1.
  - (4) Maintain awareness of transportation legislative and regulatory activities of States and local jurisdictions which could impact transportation operations and advise EM-1 of those activities.
  - (5) Review contractor qualification training programs for employees who are responsible for shipments of hazardous materials in order to ensure compliance with applicable transportation regulations and requirements.
  - (6) Issue Price-Anderson indemnity agreement certificates to carriers, upon their request, or notify the requesting carriers and the referring organization, as applicable, that the shipment is not covered by an indemnity agreement. When a licensee indemnity agreement has been entered into by the Nuclear Regulatory Commission with the consignor or consignee, or when it is not known whether such an indemnity agreement has been entered into, requests from carriers for

such certifications should be referred to the director of the appropriate Nuclear Regulatory Commission Regional Office listed in Appendix D of 10 CFR Part 20.

- (7) Conduct negotiations with carriers or authorize cost-type contractors to negotiate directly with the carriers concerning rates, classification ratings, services, and related transportation matters (a) when it is believed only their own field element will be affected, or (b) if more than one field element is affected, as designated by EM-1.
- (8) Advise other field elements, EM-1, and cognizant DOE program offices of significant freight rate changes, service requests, or petitions.
- (9) Issue Government bills of lading and authorize specific employees of cost-type contractors to issue Government bills of lading within prescribed limitations.
- (10) Maintain necessary liaison with District Directors of Customs.
- (11) Perform periodic appraisals of cost-type contractors relating to transportation and traffic management activities.

8. IMPLEMENTING PROCEDURES AND INSTRUCTIONS. Chapters I and II include specific implementing procedures and instructions. Chapter I addresses traffic management, and Chapter II addresses transportation operations.

BY ORDER OF THE SECRETARY OF ENERGY:



DOLORES L. ROZZI  
Director of Administration  
and Human Resource Management

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CHAPTER I

TRAFFIC MANAGEMENT

1. NEGOTIATION FOR RATES OR SERVICES. Relief from rates, classification rules, or carrier's regulations affecting shipments of materials which appear to warrant adjustment shall be sought by negotiation through established carrier channels. Discriminatory costs, rules, or regulations, which result in unreasonable transportation costs, impede the movement or timely delivery of Departmental materials, or impose prejudicial restrictions or requirements on Departmental shipments, provide the basis for initiation of such negotiations.
  - a. Content of Rate Proposals. Requests for adjustments should include the following justifying factors as appropriate:
    - (1) Description of commodity.
    - (2) Value of packaged shipments or released valuation.
    - (3) Manner of shipment.
    - (4) Kind of container to be used.
    - (5) Density per cubic foot.
    - (6) Size and shape of article.
    - (7) Susceptibility to damage.
    - (8) Average carload or truckload weight.
    - (9) Type of carrier equipment required.
    - (10) Special services incident to shipment, such as attendants.
    - (11) Estimated volume of movement.
    - (12) Length of haul.
    - (13) Regularity of movement (whether constant or sporadic).
    - (14) Name of origin and destination.
    - (15) Comparison of the proposed rate with existing rates on the same commodity within the same general territory or a statement concerning the similarity of the commodity to other commodities on which rates exist.
    - (16) Statement of unreasonableness or inadequacy of existing rates or other tariff provisions.

- (17) Evaluation on which existing rates are based.
- (18) Statement as to competition with other modes of transportation.

b. Procedures for Handling Rate Requests.

- (1) When it is believed that other field elements would have an interest in a rate proposal determination, the proponent field element shall furnish a copy of the proposal to EM-1 for review. Copies also should be furnished to those organizations which might be interested in the proposed negotiations.
- (2) Upon receipt and review, interested offices shall advise the proponent office and EM-1 of the extent of their interest and the desired degree of participation in the negotiations.
- (3) If it develops that several field elements are interested, a coordinated proposal (with full supporting data) must be forwarded by the proponent office through the appropriate channels to EM-1 for coordination and appropriate action.

c. Application of Rates or Services. Rates or services obtained through negotiations shall be applied to DOE and DOE contractor shipments where applicable.

2. SECTION 10721 FREIGHT RATE QUOTATIONS. Section 10721(b)(i) of the Interstate Commerce Act permits carriers to provide free or reduced rates for transportation services to Government agencies, and others. The negotiation of reduced rates and specialized services under Section 10721(b)(i) can often effect overall cost reductions to DOE programs, while at the same time preserving compensatory rate levels of participating carriers. The possibility of establishing Section 10721 rates, rules, and regulations quickly and without advance notice, even retroactively when appropriate without legal impact on commercial rates of longstanding nor protest by other shippers, should be considered. See paragraphs 1a(1) through (14) of this chapter for content of proposals and general procedures for handling rate requests.
3. CARRIER REQUESTS FOR OPERATING AUTHORITY. All participation in proceedings with the Interstate Commerce Commission or the Civil Aeronautic Board shall be with the advice and concurrence of the Office of the General Counsel. Heads of Field Elements may indicate a need for transportation service through submission of written statements to the regulatory agency concerned or by other appropriate procedures. A copy of each submission and supporting testimony shall be forwarded to EM-1.

4. COMPLIANCE WITH TRANSPORTATION LAWS OR REGULATIONS.

- a. General Requirements. DOE shipments shall comply with all laws and regulations notwithstanding the Department's national security exemption stated in Chapter II, paragraph 1c of this Order. Requests for waivers may be submitted to the cognizant regulatory authority pursuant to a determination by the Head of the field element of the need of such waiver.
- b. Radioactive and Other Hazardous Materials. State and local laws which are unduly restrictive may require the assertion of the constitutional immunities of the Federal Government. Any assertion against a State or local jurisdiction requires the concurrence of the Office of the General Counsel or the cognizant field counsel.
- c. Size and Weight Limitations for Highway Shipments. Motor carrier shipments shall conform to State and local laws, regulations, and ordinances relating to weight and size limitations. No vehicular movement which exceeds any State's legal weight or size limitation shall be undertaken over public highways unless prior permission is formally granted by the state concerned. The Department or Department's contractor support of a carrier requesting such permission may be furnished only after a determination that it is not practical to divide the load into smaller lots or feasible to move the material by other means of transportation.
- d. Waivers and Exemptions.
  - (1) Requests for transportation waivers and exemptions from Federal laws and regulations, must be made by the head of the field element to EM-1 for coordination and submission to the appropriate regulatory agency. The Deputy Assistant Secretary for Military Application (DP-20) and the Deputy Assistant Secretary for Naval Reactors (NE-60) have the option to place their requests directly with the appropriate regulatory agency, keeping EM-1 informed of such action. This is in exception to DOT exemptions for hazardous materials, which are coordinated by EH-1.
  - (2) Heads of Field Elements may file for waivers and exemptions from State and local laws, ordinances, and regulations direct with the appropriate agency, keeping EM-1 and GC-1 informed.

5. CONSIGNMENT OF SHIPMENTS. Commercial bills of lading, air bills, and other commercial documents covering shipments made by or to Department contractors shall provide for consignment of the shipments from or to either the United States Department of Energy "in care of" the Department's contractor or the Department contractor "for the United States Department of Energy."

6. DEMURRAGE AND DETENTION. To assure prompt release of carrier's equipment (particularly special capacity, heavy-duty, or other equipment in short supply), and to avoid demurrage and detention charges, a diligent effort shall be made to load, unload, and release freight equipment within the prescribed free time. Rail "average demurrage agreements" should be entered into when the volume of rail traffic justifies such an arrangement.
7. DESCRIPTION OF PROPERTY FOR SHIPMENT.
  - a. False billing or improper classification of freight is prohibited by law. The Interstate Commerce Act prescribes fines and penalties (applicable to shippers and carriers) for such falsification.
  - b. Each shipment shall be described on the bill of lading or other shipping document as specified in the governing freight classification, carrier's tariff, or rate tender. Broad descriptions which are not provided in tariffs (such as "government supplies") shall not be used. Trade names may be used in connection with published nomenclature when it is believed such use will clarify the proper classification.
  - c. Shippers who offer radioactive materials, other hazardous materials, or hazardous wastes subject to Department of Transportation or Environmental Protection Agency regulations shall describe and classify these articles on manifests and other shipping papers as prescribed in the applicable regulations. Persons who knowingly deliver any hazardous material under a false or deceptive description, marking, or other declaration are subject to criminal penalties under the Hazardous Materials Transportation Act, Public Law 93-633.
8. PREMIUM TRANSPORTATION.
  - a. Premium transportation shall be used only when the additional cost is clearly justified. When premium transportation (including exclusive use of vehicle) is used for shipments weighing 500 pounds or more, a written statement supporting the use of such transportation shall be retained in an appropriate file.
  - b. Exclusive use of a vehicle shall be requested only when justified --for security, safeguards, or programmatic reasons, because of the nature of the commodity being shipped, or because of a provision in the Certificate of Compliance, the Department of Transportation exemption, or other applicable regulations. Freight bills, or bills of lading covering such shipments, shall be annotated to indicate both that exclusive use of vehicle was requested and was furnished by the carrier.

9. CONSOLIDATION OF SHIPMENTS. Shipments should be consolidated into larger shipping quantities or units whenever such arrangements will result in transportation or administrative economies. In determining whether separate shipments may be advantageously consolidated, consideration shall be given to established stopoff privileges for partial loading or unloading at intermediate locations, inclusion of small lots in the same car or trailer with carload or truckload quantities, and possibly using freight forwarder service. Opportunities for consolidation between the various field elements should be considered. Other factors which must be considered when applicable are nuclear criticality safety, radiological safety, safeguards requirements, security interest, supporting telecommunications, and programmatic requirements.
10. TRANSPORTATION DATA.
  - a. Shipment Mobility/Accountability Concept (SMAC). This system, located at the DOE Oak Ridge Field Office, accumulates transportation data and other related data for Departmental activities. It is a valuable transportation tool for both Headquarters and field elements. SMAC data is utilized in risk analysis studies, rate negotiations, replying to Congressional and Freedom of Information inquiries and in the development of routing models for DOE's hazardous and radioactive materials. It also provides a control system to avoid duplicate freight bill payments. All field elements will participate in SMAC by providing shipment data unless exempted by EM-1. Those exempted from participation will submit an annual transportation report as prescribed in subparagraph c below and will provide transportation data as required on an ad hoc basis.
  - b. Data Input Schedule. The SMAC receives input data on a monthly basis by the 11th working day of each month for shipments made during the previous month. Quarterly submissions, while not encouraged, will be accepted. Contact point on all matters involving SMAC is the Chief of Transportation, DOE Oak Ridge Field Office.
  - c. Annual Transportation Report. The annual transportation report submitted by the field elements and the Director of Administrative Services (AD-60) shall include the following data elements:
    - (1) Hazardous and Radioactive Materials Shipments.
      - (a) Total transportation costs by hazard class or radioactive type, e.g. limited quantity, low specific activity, Type A, Type B and large quantity by mode;
      - (b) Total tons by class or type by mode; and
      - (c) Number of shipments by class or type by mode.

(2) Non-Hazardous Materials Shipments.

- (a) Total transportation cost by mode;
- (b) Total tonnage by mode; and
- (c) Number of shipments by mode.

(3) All Materials Shipments.

- (a) Costs for claims, demurrage or detention.
- (b) Costs of Departmental traffic staffs (including contractors) and associated person-years of effort expended.

d. Reporting Data. Reports shall be prepared and forwarded to reach the Headquarters Transportation Management Division (EM-561) no later than 60 days after the end of a fiscal year.

11. SHIPMENTS BY AMERICAN OR FOREIGN FLAG CARRIERS. The use of United States flag vessels and air carriers for any Government financed movement of freight is required by statute (46 U.S.C. 1241 and 49 U.S.C. 1517) when such vessels and air carriers are available. When a foreign flag vessel or air carrier is substituted, an explanatory certificate or memorandum must be included in the shipment file with a copy used to support the foreign flag carrier's freight bill. A facsimile of the type of certificate required is shown in 4 CFR Part 52.2. Under this same part, the Comptroller General has the authority to disallow any expenditure for foreign flag service not so justified.

12. CLASSIFICATION OF TRANSPORT VEHICLES AND AIRCRAFT.a. Application.

(1) Public Vehicle. Interpretation of this definition has varied from time to time. In order that vehicle (rail or highway) be considered as a public vehicle, it must meet both the conditions of either ownership or lease and the condition of use by the Government in a nonrevenue-producing operation. It is not sufficient for the transportation operation to be "supervised" or "controlled" by the United States Government. The operation must be outside of the definitions of common, contract, or private carriers engaged in commerce, as defined in Section 203(a) of the Interstate Commerce Act (49 United States Code 303). Examples:

- (a) Trucks and automobiles owned by the DOE, with title vested in the Government, are operated by Department contractors (such as Martin Marietta Energy Systems at the DOE Oak Ridge Field Office, Westinghouse Savannah

River Company at the DOE Savannah River Field Office, and Sandia at the DOE Albuquerque Field Office). The vehicles are driven by contractor employees, acting on behalf of the Department. This activity is ancillary to the primary function of the contractor of performing research and development. The contractor's transportation activities are nonrevenue-producing and the contractor is not engaged in commerce. Such vehicles are public vehicles.

- (b) The Department leases cars and trucks from a commercial vehicle rental company. The vehicles are assigned exclusively to the Department, and the vehicles are operated and maintained either by the employees of the Department or the contractor or DOE contractor as in paragraph 12a(1)(a), above. Such vehicles are public vehicles.
- (c) A field element or a contractor engages the services of a commercial carrier to transport an intersite shipment of classified materials offsite, between facility X and facility Y. The Department provides escort cars driven by Department or contractor employees. The truck is driven by an employee of the carrier. This is a commercial trucking operation involving for-hire carriage in which the operator of the truck is engaged in a revenue-producing operation. The truck is a for-hire vehicle, not a public vehicle.
- (d) A Department-owned semi trailer is loaded with Government-owned property by a Department contractor. A commercial carrier is engaged to provide a tractor and driver to haul the semi trailer from National Laboratory X to National Laboratory Y. This movement is a commercial operation and the carrier is engaged in a revenue-producing operation. The truck, including the semi trailer, is a for-hire vehicle, not a public vehicle.
- (e) A special train is made up of twelve Department-owned rail cars including two Department-owned escort rail cars. A locomotive owned and operated by a rail carrier is used to pull this special train. The train crew is employed by the rail carrier. These transportation activities are revenue producing. None of the rail cars including those owned by the Department are public vehicles, and the movement constitutes for-hire carriage.

- (2) Government Aircraft. Ownership of an aircraft is not a factor in determining whether the aircraft is considered a Government aircraft, not subject to the regulations of the Federal Aviation Administration of the Department of Transportation. The application of the term "Government aircraft" depends solely on the dedication of the use of the aircraft to the service of the Government and the control exercised by the Government over the crew, maintenance, and dispatch of the aircraft. See 49 CFR, Part 175.5, for details. Examples:
- (a) Department-owned aircraft operated by a commercial air carrier. The aircrafts are used exclusively in the service of the Government. The carrier is engaged in a revenue-producing operation in air commerce. The aircraft is a Government aircraft.
  - (b) An aircraft owned by an air carrier assigned for Government shipments under a contract which stipulates the aircraft is reserved for exclusive use of the Government during the life of the contract. The aircraft is a Government aircraft.
  - (c) The same aircraft described above is also operated by the air carrier under contracts with several other government agencies which permit use, but the carrier is under contractual obligation to operate the aircraft only for Government uses and not commercial. The aircraft is a Government aircraft.
  - (d) An aircraft operated by an air carrier under contract with the Department for routine daily shuttle flights between National Laboratory X and National Laboratory Y. On some daily flights only Government freight and official Department or other Government passengers are carried. On other daily flights, revenue passengers (e.g., dependent, vendors) are carried as an authorized contractual service to those passengers due to the remoteness of National Laboratory Y. Such alternative or optional use of the aircraft, or of mixed government and commercial shipments on the same aircraft, is deemed to be air commerce. The aircraft is a civil aircraft, not a Government aircraft, even while employed for Government shipments or carriage of Government employees on official business.
  - (e) An aircraft operated by an air carrier under contract with the Department for occasional shipments of Government property between National Laboratory X and National Laboratory Y. The contract permits use of the aircraft for commercial purposes when not engaged



under contract with the Department. The aircraft is a civil aircraft, not a Government aircraft, even while employed for Government shipments. If the aircraft was modified specifically to accommodate Departmental needs and is, in fact, not operated for other than Departmental purposes, the aircraft is a Government aircraft.

- b. Determination of Classifications. It is the responsibility of the program office director or field element head to determine whether a vehicle or aircraft is public, Government or for-hire. The above guidelines shall be considered in making the decision. Doubtful cases should be referred to EM-1 who will obtain the necessary interpretation from the appropriate authority.

13. MILITARY AIR TRANSPORTATION.

- a. Conditions and procedures pertinent to the use of military air transportation service to handle shipments for the Department and its contractors are outlined below. These procedures are not applicable to shipments of nuclear explosives and components within the purview of the Division of Naval Reactors and the Office of Military Applications.
- b. Use of the Department of Defense (DOD) air transportation systems shall be in accordance with that Department's regulations (Air Force Regulation 76-38 Attachment 5). The DOD will handle Department of Energy and its contractors' shipments when the air transportation required is of official concern to, and is to be paid for (directly, or by reimbursement to the contractor) by the DOE. DOE shipments of programmatic interest (official concern) but which are to be made by other than the DOE or its contractors, may also be handled by the DOD, if the DOE certifies that such transportation is in the national interest. Use of military air transportation for DOE activities is premised on a situation in which commercial air transportation is neither readily obtainable nor satisfactorily capable of meeting program requirements. Except for the Deputy Assistant Secretaries for Naval Reactors and Military Application programs, requests for obtaining military air transportation service shall be made through EM-1 and shall include program division certification that such transportation is in the national interest, and that commercial air transportation is not readily obtainable nor satisfactorily capable of meeting program requirements. The following information is required by EM-1 prior to the submission of DOE requests for special airlift air missions from the DOD.

- (1) Overall Security Classification of Special Airlift Air Mission. (Special weapons movement will carry a minimum classification of restricted data to identify movement.)

- (2) Mission Number. Assigned by the Department of Defense.
- (3) Priority. Assigned as explained in Attachment 6 of Air Force Regulation 76-38.
- (4) Unit and Project Name (or Nickname).
- (5) Route (all of the following to be identified by airfield: that is, Anderson Air Force Base, Guam vice Guam):
  - (a) Onload.
  - (b) Enroute stops.
  - (c) Offload.
- (6) Dates. Do not request specific times unless absolutely necessary, are than one onload or offload, give availability desired pickup and delivery of each.
  - (a) Availability.
  - (b) Date pickup is desired.
  - (c) Date delivery is required.
- (7) Passengers.
  - (a) Total number of passengers. If cargo airlift, indicate those passengers who may be couriers, technical escorts, or foreign nationals.
  - (b) Total weight of excess baggage. Do not include normal baggage weight.
- (8) Cargo.
  - (a) Short tons of cargo, to the nearest ton. Do not include baggage weight.
  - (b) Total cube (cubic feet).
- (9) Security Classification of Cargo. Avoid using the term "Not Applicable" if there is any cargo. If cargo is unclassified, so state.
- (10) Commodity Description and Any Other Pertinent Information. Use complete service nomenclature and Department of Transportation shipping name and class, if appropriate.

- (11) Bulk.
- (a) Weight of the largest single item in pounds followed by cube; for example: 780/95.
  - (b) Dimension of the largest single item in inches; specify length, width, and height. See descriptions of outsize and oversize cargo. Indicate in remarks section all wheeled or skid mounted cargo exceeding 104" in length, 60" in width, or 48" in height.
- (12) Net Explosive Weight. Indicate in the remarks section the net explosive weight by class and quantity-distance, class of each item containing Class A or B explosives. For special weapons provide the number and type units, type container, unit weight, net explosive weight, and total weight in the onload or offload order.
- (13) Identify Appropriate Paragraphs of Air Force Regulations AFR-71-4. Identify each hazardous item and cite all applicable lowest subparagraphs in compliance thereto for each item. (Use remarks section, if necessary. ) Hazardous materials are not airlifted unless there is compliance with all provisions of subject regulation.
- (14) Onload Contact.
- (a) Give full name, office, and home phone, as applicable.
  - (b) Enroute stop contact. Include full name, office, and home phone.
  - (c) Destination contact. Give full name, office, and home phone.
- (15) Billing Instructions. Include the appropriation chargeable, as appropriate. If none of these are available, include the name and address of a specific organization responsible for reimbursing on direct billing basis.
- (16) Remarks. Add the following--Geographic location of info addressees. The addressees must be identified fully.
- c. For shipments of programmatic interest (official concern) to the Department, but which are to be made by a vendor or agent of a cost-type contractor at the direction of that contractor, the field element will furnish the above information as well as a certification that such transportation is in the national interest, and the name of the nongovernmental agency, company, or individual responsible for reimbursing the Department of Defense.

14. INSURANCE REQUIREMENTS.

- a. Consistent with the Government's self-insurance policy, funds shall not be expended to insure property against loss, damage, or destruction while in transit. In instances where the governing tariff limits the carrier's liability to a value per pound or a value per shipment and provides an additional charge for shipments exceeding that value, declare the highest value which the carrier will honor without additional charge or enter 'no value declared' (NVD) if the limiting value is unknown. Similarly, when rates or classification ratings vary according to a declared value, declare the maximum value applicable to the lowest published rate or rating.
- b. Rates on a few commodities are based on actual value requiring that the actual value be declared. Declaration of full value on shipments on nonradioactive precious metals in certain circumstances is discussed on page II-4, paragraph 3b(5).

## CHAPTER II

### TRANSPORTATION OPERATIONS

#### 1. WAIVERS AND STATUTORY EXEMPTIONS FROM FEDERAL REGULATIONS.

- a. Exemptions from General Services Administration Transportation Relations. The Department and its contractors' transportation and traffic management activities have certain exemptions from the Federal Property and Administrative Act of 1949, as amended (Public Law 152, 81st Congress, 63 Stat., 377) at title II, section 201(b) which provides "The Administrator (GSA) shall as far as practicable provide any of the services specified . . . to any other Federal agency . . . upon request." Title VI, section 502(d), of the same Act provides "nothing in this Act shall impair or affect any authority of . . . (13) the Atomic Energy Commission (AEC) ."

- (1) Title 41 CFR, Part 109-40, "Transportation and Traffic Management," iterates the applicability of and departure from 41 CFR, parts 101 et seq., for the Department of Energy and its cost-type contractors in conducting transportation and traffic management type activities. There is no specific exemption from GSA's Centralized Household Goods Traffic Management Program. (41 CFR, part 40.203-4(a).)
- (2) Traffic Management and Transportation Operations functions existed in the Atomic Energy Commission; therefore, such functions are vested in the Department pursuant to the Energy Reorganization Act and the DOE Organization Act (Public Law 95-91).

- b. Exemptions from Nuclear Regulatory Commission Packaging and Transportation Relations. The Department's nuclear facilities and operations, including packaging and transportation functions, are generally exempt from Commission regulations and requirements as reflected in 10 CFR parts 30.12, 40.11, and 70.11.

- (1) Section 104 of the Energy Reorganization Act of 1974 (Public Law 93-438) abolished the Atomic Energy Commission and transferred to the Energy Research and Development Administration all functions and responsibilities not specifically assigned to the Nuclear Regulatory Commission. Section 301 of the Department of Energy Organization Act of 1977 (Public Law 95-91) transferred the Energy Research and Development Administration responsibilities to the Department of Energy.
- (2) The Department's nuclear materials transportation operations, unless otherwise exempted, shall be in compliance with the appropriate Federal regulations, or as a

minimum, provide equally effective levels of shipment safety and security protection. Deviations from such regulations, except as authorized by DOE Orders shall be reported in advance to EM-1 with appropriate justification, for coordination at the Headquarters level.

- (3) An important consideration for transportation operations and associated requirements is to ascertain the point of custody transfer or passage of title in making nuclear materials shipments to or from Commission licensed facilities. The point at which custody transfers or title passes shall be identified in the contract between the Department, or its license exempt contractors, and the licensees. This determination is required to establish custody or ownership of materials in transit, and the application of associated rules and regulations.

- c. National Security Exemption. Title 49 CFR, part 173.7(b), of the Hazardous Materials Regulations, Department of Transportation, states: "Shipments of radioactive materials, made by or under the direction or supervision of the U.S. Department of Energy (DOE) or the Department of Defense (DOD), and which are escorted by personnel specifically designated by or under the authority of those Agencies, for the purpose of national security, are not subject to the regulations in parts 171-178." Any questions concerning the applicability of National Security Exemption for specific DOE shipments, shall be referred to EM-1 for resolution with other Departmental entities at the Headquarter's level.

## 2. PACKAGING AND MARKING OF MATERIALS FOR TRANSPORTATION.

- a. Properly preparing materials for transportation is the responsibility of the shipper. Proper preparation enables the materials to reach destination in good order. Except for those goods which can be shipped in bulk or loose, goods should be packaged in material of sufficiently substantial construction to withstand the ordinary hazards of transportation. Both packaged and loose materials must be marked to assure prompt, safe, and correct delivery. Minimum packaging and marking requirements for materials in transportation are contained in the "Freight Classifications" of the various modes of transportation. Noncompliance can result in penalty rate assessments, denial of claims or both when materials are damaged in transit. More detailed guidance regarding packaging and marking of specific items may be developed locally as necessary.
- b. The packaging, marking, labeling, and placarding regulations of the Department of Transportation applicable to all shippers, are contained in 49 CFR parts 171-179. Noncompliance with these

regulations carry both civil and criminal penalties. Reporting requirements for hazardous material incidents are those listed on page 11-13 paragraph 7d.

3. PACKAGING AND TRANSPORTING PRECIOUS METALS.

a. Radioactive Precious Metals. Radioactively contaminated precious metals will be shipped in full compliance with applicable regulations governing radioactive shipments.

b. Nonradioactive Precious Metals. The following applies only to precious metal shipments which are not radioactively contaminated.

(1) Packaging. Precious metals should be packaged in a strong, leak tight inner container and then placed with cushioning into an overpack such as a 3-, 5-, or 10-gallon metal can or suitable wooden box. If the configuration of the material prohibits the use of the aforementioned packaging, then a suitable leak-tight substitution of strong fabrication may be used. The overpack in all packaging configurations shall be banded or sealed in such a manner as to deter entry into the package.

(2) Modes of Transport.

(a) The following modes are approved for the transportation of precious metals that do not exceed the value limitations established in subparagraph (3)(a).

1 Signature Security Service - Federal Express or other comparable carriers with similar security service approved by the appropriate field element transportation manager.

2 Registered Mail - return receipt.

(b) In the event that the packages exceed the size and weight limitations that the modes described in subparagraph (2)(a) are able to accommodate, or exceed the value limitation provided in subparagraph (3)(a), the following modes should be considered:

1 Existing DOE contract carriers.

2 Commercial security-type carriers (i.e., Brinks, Wells Fargo).

3 Other specialized systems approved by the field element transportation managers.

(3) Value of Shipments.

- (a) Generally, shipments shall not exceed \$50,000 (current market value) per day for each carrier from each Departmental facility.
- (b) In the event an individual shipment or the total per day shipments of a single carrier will exceed \$50,000 (current market value), approval will be requested from the appropriate field element transportation manager at least 48 hours prior to the anticipated shipping date.

(4) Shipping Descriptions. For the purpose of preparing bills of lading and air waybills, nonradioactive precious metals are to be classed as "METALS, NOT OTHERWISE INDEXED (NOI)."(5) Insurance. In accordance with the Federal Property Management Regulation 101-40.104, a value normally will not be declared nor insurance obtained other than that which normal freight charges would provide for the description appearing on the shipping document. Full value will be declared when the shipment is made via modes approved under subparagraph (2)(b).4. LOADING METHODS AND TIEDOWN REQUIREMENTS. Various methods may be used to meet the regulatory requirements for loading, blocking, bracing, and tiedown of the many types of freight. The most successful programs are usually accomplished through close cooperation between shipper and carrier with close adherence to applicable carrier tariff requirements, Association of American Railroads loading rules, and the requirements of 49 CFR, part 393.

- a. Responsibilities. Commercial air carriers load, block, brace, or otherwise restrain freight which they transport. Motor freight and rail carriers have the same responsibility for freight of a size which can be loaded by one man, otherwise the shipper will elevate and position the freight on or into the vehicle as directed by the carrier. The shipper is responsible for loading, blocking, bracing, or otherwise restraining freight loaded on or in a railcar or motor vehicle if rates are predicated on "shipper's load and count." However, for all modes when the freight consists of hazardous materials, it is incumbent upon the shipper to assure that such freight is loaded and restrained properly.
- b. Acceptable Practices. The following represents a composite of acceptable practices which should be applied to assure a successful program.



(1) Loading.

- (a) The vehicle selected shall be appropriate for the weight, concentration, and center of gravity of the load. This is a joint responsibility of the shipper and carrier.
- (b) Before a shipment is loaded upon a transport vehicle, the shipper shall visually survey the equipment externally to determine its general operating condition, its capability to transport the shipment, the existence of appropriate restraint devices in good condition, and assure the estimated gross weight of the shipment does not exceed the authorized carrying capacity of the conveyance.
- (c) Reasonable precautions such as wheel chocking shall be taken to prevent motion of the conveyance during the loading or unloading process.
- (d) It is the shipper's responsibility to give the carrier prior notification of overweight or overdimensional shipments. The carrier is responsible to ensure that highway weight and clearance restrictions are met.
- (e) The loading device used to load or unload a shipment shall be appropriate for the dimensions and weight of the package. Loading devices which may possibly damage any packages of a shipment shall not be used.
- (f) Heavy containers not shipped on specially designed vehicles shall have skids or load spreaders to maintain load distribution within the area load-rating of the vehicle, or to less than 500 pounds per square foot, whichever is less.
- (g) The shipment must be positioned on the conveyance in such a way that the weight is equally distributed over the width and length of the conveyance. For rail and motor freight shipments, the load should be positioned as equally as possible among the vehicle's axles. The location of attachment points for tiedown members shall be selected accordingly. Proper placement of the load on the vehicle to avoid exceeding maximum allowable axle loadings is the responsibility of the carrier.
- (h) The ends, side, or doors of conveyance shall not be relied upon to prevent shifting of heavy loads unless they are specifically designed for this purpose.

- (2) Blocking and Bracing. Packages shall be blocked and braced on or in the conveyance to prevent shifting or changing of position during normal transportation conditions, and to remain stable after the restraints are removed. For motor freight, carriers and shippers shall observe the provision of 49 CFR 393.104.
- (3) Tiedown Assemblies.
  - (a) For motor freight, carriers and shippers shall observe the provisions of 49 CFR 393.100-102 to restrain cargo.
  - (b) Elastic properties should be considered when selecting material for use in a tiedown system. For example, wire rope is preferable over chain because it is more flexible and better able to withstand the shocks of transportation.
  - (c) Only tiedown materials with a strength rating (working and/or ultimate) established and documented by the manufacturer shall be used. The following shall not be used as components of a tiedown system;
    - 1 Plastic or fiber rope.
    - 2 Any material with unknown strength.
    - 3 Any damaged material.
  - (d) The principal tiedown forces should be transmitted to the vehicle frame and not to the wood or metal decking.
  - (e) The strength of the tiedown attachment points on the conveyance should be greater than or equal to the strength of the tiedowns themselves. In the case when the strength of the tiedowns exceeds or equals the structural design limits of the conveyance itself, the strength of the tiedown attachment points on the conveyance is limited to the structural design strength of the conveyance.
  - (f) Flexible tiedowns (wire rope, strap, chain, etc.) should be free from contact with any other stationary objects when taut to prevent chafing and damage during transport. Tiedown assemblies must be appropriately preloaded and secured so that they will not become loose during restraints are removed. The base of the load should be blocked in place.

- (g) Engineered tiedowns, such as rigid clamping with bolts and structural shapes, may be preferable over flexible tiedowns for heavy weight, high center of gravity, or high consequence packages.
- (h) For domestic rail shipments, the carrier shall observe the provisions of the Association of American Railroad Circulars providing rules for the loading, blocking, and bracing of freight. Circulars are available for the various types of railcars in service.
- (i) Exposure of the tiedown components to dirt, weather extremes, water, or corrosives may reduce their strength, so these conditions should be avoided if possible. Use caution to avoid kinking, crimping, or splaying wire rope. Repairs shall not be attempted on wire rope, straps, or chains, unless a documented rating of the strength can be established by test following the repair.
- (j) The load shall be inspected thoroughly by the shipper and carrier prior to release of the shipment. The shipper should ensure that the carrier recognizes his or her responsibility to check the tiedowns periodically during transit, and tighten them as necessary.

5. CARGO SECURITY.

- a. General. The various types of protective services may be found in carrier tariffs or negotiated as required under section 10721 of the Interstate Commerce Act.
- b. Type of Services Available. The following protective services generally may be obtained from common carriers:

(1) Airlines.

- (a) Signature Service. Some airlines provide person-to-person tally and signature while a shipment is in the custody of the airlines.
- (b) DOE Armored Courier Service. DOE shipment couriers accompanying the cargo will be carried by some airlines under conditions specified in their tariffs.

(2) Motor Carriers.

- (a) Sealed Van Service. This service provides for sealing the transport van or closed truck at point of origin.

- (b) Exclusive Use Vehicle. The assigned vehicle is loaded only by the consignor, and unloaded only by the consignor or consignee. Exclusive use also may include sealed or locked van provisions.
    - (c) Signature Service. Some motor freight carriers provide person-to-person tally and signature while a shipment is in their custody.
  - (3) Sealed Railroad Car Service. This service provides for sealing of freight cars at point of origin with railroad or DOE seals. It is also advisable to equip cars with special locking devices to protect compartments from theft or pilferage.
  - (4) United States Mail. Special protective services available, and instructions, are set forth in the DOE 1410 directive series, and in the United States Postal Service Regulations, 39 CFR.
- c. Security Requirements for Materials in Transit.
- (1) The principal hazards to the security of materials in transit are espionage, sabotage, collusion, theft, damage, improper routing, and misdelivery.
  - (2) Shipments of classified materials, and unclassified special nuclear materials, must meet the applicable requirements of DOE 5632.1B and DOE 5632.2A.
  - (3) Shipments of high-value materials, not covered under DOE 5632.1B and DOE 5632.2A, shall be made in a manner which will provide cargo security commensurate with their value. These materials include items which have a high strategic, intrinsic, or operational value, and which must be delivered in a timely manner. The packaging and transporting of precious metals shall be in compliance with page 11-3, paragraph 3.
  - (4) Where practicable, the number of individual high-value items of cargo to be tendered for transportation should be reduced by consolidating individual packages into larger shipment units, giving due regard to nuclear criticality safety limits for radioactive materials. The following are examples of acceptable methods of consolidation:
    - (a) Palletization and banding.
    - (b) Crating.
    - (c) Overpacking in freight container of a suitable size.

- (5) Shippers shall ascertain, prior to shipment of high-value materials that the specified protective services can be provided continuously for the shipment until receipt by the consignee.
- (6) Care should be taken to assure that classified information is not revealed on shipping documents or on labels on packages which are used pursuant to the Department of Transportation's Hazardous Materials Regulations. Appropriate freight descriptions and procedures should be worked out with interested carriers which are commensurate with the sensitive nature of the shipment and which will afford an equitable return to the carrier for the services performed. For shipments of precious metals, utilize instructions provided on page 11-4, subparagraph 3b(4).
- (7) Depending upon the strategic nature and value of the materials shipped, a communications plan, as appropriate, shall be noted on each bill of lading indicating emergency actions to be taken and include, as a minimum, who to notify in event of accident, loss or theft, or any unusual event threatening the security of the materials while in transit, and how this notification is to be accomplished.

- d. Endorsement on Bills of Lading for Rail Shipments. For shipments requiring escort personnel one bill of lading may be prepared for both the shipment and the transportation of the escort personnel. In such cases, the maximum number of escort personnel shall be shown and the following notation placed directly below the number:

"Carriers will make collection by filing a single bill covering freight and service charges, for the carriage of up to (insert maximum number) attendants.

This is not to preclude, where appropriate, the use of Government Transportation Requests (GTR), SF 119, in providing transportation of escort personnel.

- e. Failure to Provide Protective Services. When protective services specified by the shipper either are not provided or are inadequate or unsatisfactory, every effort should be made to resolve the matter by local negotiations between the carrier and the DOE office or DOE contractor noticing the deficiency. If the latter, the concerned DOE office must be kept currently informed and should assist, upon request, in the negotiations with the carrier. If, in a particular instance, the remedial action by the carrier is not satisfactory to the responsible field element, the official will send a written summary of the case to EM-1 for appropriate handling.

- f. General Cargo Security Advisory Standards. The Department of Transportation has published several documents which provide general guidance in the field of cargo security:
- (1) A comprehensive listing of cargo theft prevention measures intended to assist transportation management in developing an effective security system.
  - (2) Guidance and assistance for shippers and receivers in the development of a cargo security program.
  - (3) A partial inventory of available security equipment and systems, for application in the prevention of cargo theft.

6. CUSTOMS CLEARANCE OF IMPORT SHIPMENTS.

- a. Determination of Dutiable Status. Articles imported into the United States are classified under the provisions of the Tariff Schedules of the United States as being duty free or subject to the payment of respective rates of duty. Because of the numerous changes which have been and are being made in the schedules since the Tariff Act became effective, the United States Tariff Commission periodically issues, for the purpose of convenience and clarity, a publication entitled "Tariff Schedules of the United States Annotated," from which may be determined the current dutiable status of imported merchandise. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.
- b. Showing Description and Value on Customs Documents. It should be recognized that commodity descriptions may be different on the shipping papers and the customs documents. The description appearing on the shipping papers must comply with the carriers tariff provisions and other regulatory agencies, whereas the description appearing on the customs documents must comply with the Customs Tariff; otherwise, clearance may be delayed by the United States Customs Service. The United States appraising officers are required by law to establish a value for imported goods. The true purchase price (including terms of sale) shall be shown by the importer and, where possible, the current market value at the time of export from the country of exportation. It is essential that a specific value be declared on all Departmental imports. The importer is responsible for entering the merchandise at the appropriate value and is not bound by any information secured from the appraiser.
- c. Imports with Security Interest. When it is necessary for security reasons to conceal identity or prevent publication of import statistics covering commodities being entered, EM-1 in coordination with EHY1 will, upon request, make special arrangements with the United States Customs Service and Bureau of

the Census. In such cases, the request should include all available pertinent information, including commodity description, country of origin, date of departure from origin port, port of entry, and name of carriers. Activities involving the United Kingdom Cooperation authorized pursuant to sections 144b and c of the Atomic Energy Act will be processed by the Deputy Assistant Secretary for Military Application. Also see Public Law 95-242, "Import/Export of Nuclear Materials," when applicable.

- d. Duty-Free Imports. Government Agencies are eligible for duty-free entry of scientific instruments and apparatus. U.S. Customs form DIB-338P, "Request for Duty-Free Entry of Scientific Instruments or Apparatus," available from the United States Customs Service, shall be used for the application of duty-free entry. The application requires demonstration that there is no equivalent item manufactured in the United States of America.

- 7. CHECKING VEHICLES AND PACKAGES FOR DAMAGE AND LEAKAGE. Good practice dictates that packages of hazardous materials are inspected promptly upon receipt for damage or other evidence of possible leakages to assure that any potential public exposure to contamination will be identified and appropriate action can be taken. Procedures developed for this purpose follow:

- a. Early Pickup and Monitoring.

- (1) The procedures in subparagraphs (2), (3), and (4), below, are not required for shipments consisting solely of packages which are not labeled with a Department of Transportation hazardous materials label or contain only special form radioactive materials.
- (2) All shipments of hazardous materials received from carriers shall be inspected promptly and carefully for damage and leakage after they are delivered by the carrier, and, if practicable, before the delivery truck departs. Where the DOE consignee is responsible for picking up the shipment from the carrier's terminal facility, the packages shall be picked up as expeditiously as possible, after notification by the carrier of its arrival and checked for leakage.
- (3) Any package of hazardous material suspected to be damaged or leaking shall be checked for external surface contamination. If the package is contaminated externally, and, in the case of radioactive materials, above the "significant removable contamination" limits specified in 49 CFR, part 173.397, it will be assumed that the delivering vehicle and areas in which the package was loaded, unloaded, or stored are contaminated also.

- (4) If it is known, assumed, or suspected that the delivering vehicle is contaminated, the delivering carrier and all intermediate carriers shall be notified immediately so that potentially contaminated vehicles can be withdrawn from service and checked. Loading docks and terminals through which the package(s) passed in transit, along with other accompanying packages, also shall be surveyed. Vehicles onsite should be detained by the DOE consignee until surveyed and decontaminated if necessary. The carriers are responsible for arranging for contamination surveys on intransit docks and terminals. Guidance for reporting occurrences is contained in DOE 5000.3A.

b. Hazardous Materials Contamination. Monitoring and decontamination of a commercial carrier's vehicles, of the consignee's terminal facilities and any other accompanying packages contaminated by hazardous material during transportation, are the responsibilities of the carrier and the shipper as may be provided by special agreements between the carrier and the shipper. The Department's consignee is responsible only for monitoring and decontamination at the consignee's facility, but these activities may include the carrier's vehicle, if necessary, for the protection of health and safety. When radioactive material is involved, the carrier may request DOE radiological emergency advice and assistance in evaluating the possibility that other transportation vehicles, terminals, intermediate carriers, or places en route may have been contaminated. The DOE consignee may request or initiate radiological emergency assistance if there is a need to protect the public health and safety.

c. Emergency Response.

- (1) DOE has a national radiological assistance plan for dealing with the unlikely event of a radioactive material release while in transit. Under this plan, DOE will make available from its resources, radiological advice and assistance as appropriate to protect the public health and safety or to cope with radiological hazards. DOE personnel will respond to requests from NRC licensees, Federal State, and local authorities and private persons or companies, including carriers. Assistance can be obtained from one of eight DOE regional coordinating offices. A list of these offices and their geographical areas of jurisdiction are shown in Attachment 11-1.
- (2) The chemical industry also maintains a Chemical Transportation Emergency Center (CHEMTREC), telephone 800-424-9300, which is a clearinghouse for information and assistance on all types of chemical spills including



radioactive. When the material has radioactive properties, the Center activates the DOE regional coordinating office having jurisdiction.

- (3) All DOE-owned shipments of radioactive and other hazardous materials, substances, and wastes will comply with the DOT requirements for Emergency Response Information cited in 49 CFR, Subpart G, Sections 172.600-172.604.

- d. Reporting Requirement. Carriers are responsible for reporting hazardous materials leakages, or suspected radioactive contamination, to the DOT in accordance with Title 49, CFR, parts 171.15, 171.16, and 171.17. The DOE consignee is responsible for providing the carrier with information necessary to make that report. DOE consignees will request a copy of the report from the carrier as a courtesy. When the report is received by the consignee, copies are to be forwarded to EM-1. DOE consignees are also required to report accidents and incidents involving DOE shipments to DOE Headquarters in accordance with DOE 5000.3A. Carrier personnel involved in a reportable accident are required to notify their own supervisory personnel. Local police, fire, or other emergency officials are notified as necessary. The carrier's procedures usually require that both the consignor and the consignee be notified. When notified, DOE organizations or contractors should assist the carriers as much as possible. DOT/EPA has a 24-hour telephone for the mandatory reporting of hazardous materials incidents, (800) 424-8802. The EPA incident reporting requirements on hazardous substances, Title 40 CFR Part 302.6, specify "the persons in charge of facilities" will initiate such reports.

8. SHIPMENT NOTIFICATION POLICY. It is the policy of the DOE, applicable to all contractor shippers, to provide advance written notification on all shipments of unclassified high-level radioactive waste and spent nuclear fuel to the designated representatives to the States through which any such shipments will pass. For the purposes of this policy, the definitions of irradiated reactor fuel or "spent fuel" and "high-level radioactive waste" are those found in DOE 1540.4.

- a. DOE Unclassified Spent Fuel.

- (1) The notification must be in writing and sent by registered letter, return receipt, to the office of each appropriate Governor or Governor's designee. A notification delivered by mail must be postmarked at least 7 days before transport of a shipment within or through the State. A notification delivered by messenger must reach the office of the Governor or Governor's designee at least 4 days before transport of a shipment within or through the State. A list of the mailing addresses of Governors or Governor's designees has been provided to the Manager of each DOE Field Office. Updates

of this list are to be published each year in the June 30 issue of the Federal Register. Shippers unable to obtain the latest Federal Register listing locally should contact the Transportation Management Division (EM-561).

(2) The notification must include the following information:

- (a) The name, address, and telephone number of the shipper, carrier, and receiver.
- (b) A description of the shipment as specified by the DOT in 49 CFR, Parts 172.202 and 172.203(d).
- (c) A listing of the routes to be used within the State.
- (d) The estimated date and time of departure from the point of origin.
- (e) The estimated date and time of entry into the Governor's State.
- (f) The estimated date and time of departure from the Governor's State (in such cases where the destination is not within the State).
- (g) A statement that the information is required by DOE to be protected against unauthorized disclosure.

(3) A DOE shipper shall notify, by telephone or other means, a responsible individual in the office of the Governor or the Governor's designee of any schedule change that differs by more than 6 hours from the schedule information previously furnished in the written notification.

(4) Notice of cancellation of a spent fuel shipment can be made by telephone to each State affected. No written notice of cancellation must be made to the States. A record should be retained of the responsible individual contacted about the cancellation of a shipment.

b. DOE Unclassified High-Level Radioactive Waste.

(1) The requirements for timely submission of notification on shipments of unclassified high-level radioactive waste are the same as those cited in paragraph 8a(1) of this Chapter for shipments of unclassified spent fuel.

(2) The notification must include the following information:

- (a) The name, address, and telephone number of the shipper, carrier, and receiver.

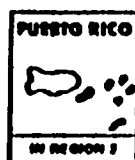
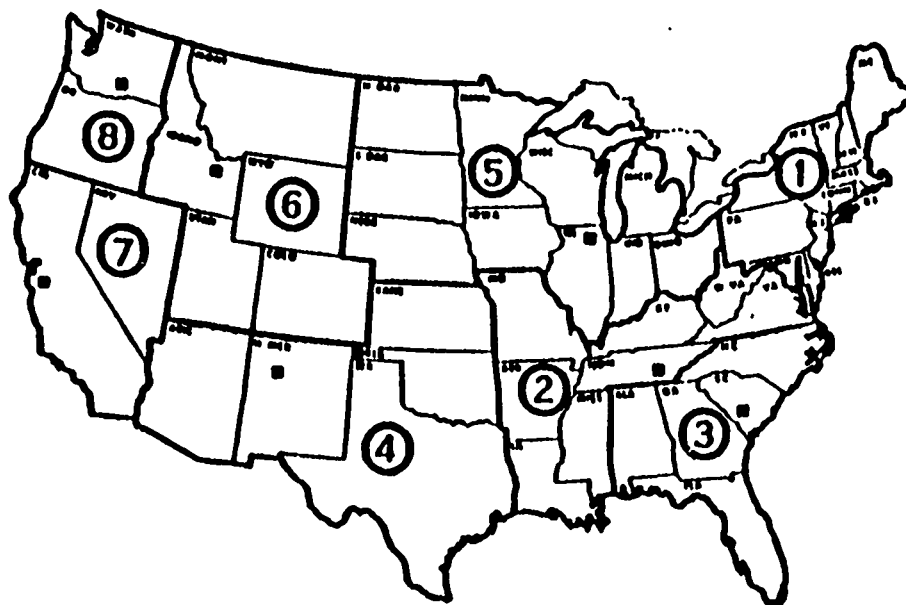
- (b) The address of the point of origin of the shipment and a 7-day period during which departure of the shipment is estimated to occur.
  - (c) A description of the waste shipment as specified by the DOT in 49 CFR Parts 172.202 and 172.203(d).
  - (d) A 7-day period during which arrival at the State boundaries is estimated to occur.
  - (e) The destination of the shipment and the 7-day period during which arrival of the shipment is estimated to occur.
  - (f) A point of contact with a telephone number for current shipment information.
  - (g) A statement that the information is required to be protected against unauthorized disclosure.
- (3) A DOE shipper shall notify, by telephone or other means, a responsible individual in the office of the Governor's designee of any change from the schedule information previously furnished in the written notification.
- (4) The provisions for the cancellation of a shipment of high-level waste are the same as those cited for a shipment of spent fuel in paragraph 8a(4) of this Chapter.

9. SHIPMENT CAMPAIGN PLANS.

- a. For all Departmental shipments of highway route-controlled quantities of radioactive materials, or like quantities by rail or barge, a shipment plan will be submitted to EM-561 for all such shipping campaigns 45 days in advance of such shipments.
- b. Single shipments without any expectation of follow-on shipments are exempt from this requirement. Also exempt are all weapons and special nuclear material shipments transported in safe-secure trailers.
- c. The shipping plan will include material type, shipping dates, estimated number of shipments, mode of transport, carrier proposed routes, package or cask description, and cargo security arrangements if required. Should any of the shipping plan data be classified, submission of the plan should be in complete compliance with applicable Departmental directives on the transmission of such data. Should only a portion of the plan be classified, those portions should be specifically identified.



**DEPARTMENT OF ENERGY**  
**REGIONAL COORDINATING OFFICES**  
 FOR  
**RADIOLOGICAL ASSISTANCE**  
 AND  
**GEOGRAPHICAL AREAS**  
**OF RESPONSIBILITY**



REGIONAL COORDINATING OFFICE	POST OFFICE ADDRESS	TELEPHONE for ASSISTANCE
① BROOKHAVEN AREA OFFICE	UPTON, L.I. NEW YORK 11973	(516) 282-2200
② DOE OAK RIDGE FIELD OFFICE	P.O. BOX 2881 OAK RIDGE, TENNESSEE 37831	(615) 578-1005 or (615) 525-7885
③ DOE SAVANNAH RIVER FIELD OFFICE	P.O. BOX A AMEN, S.C. 29801	(803) 725-3333
④ DOE ALBUQUERQUE FIELD OFFICE	P.O. BOX 5488 ALBUQUERQUE, NEW MEXICO 87115	(505) 844-4867
⑤ DOE CHICAGO FIELD OFFICE	9808 S. CASS AVE. ARGONNE, ILLINOIS 60439	Duty Hrs. (312) 972-4808 Off Hrs. (312) 972-5731
⑥ DOE IDAHO FIELD OFFICE	705 DOE PLACE IDAHO FALLS, IDAHO 83402	(208) 526-1515
⑦ DOE SAN FRANCISCO FIELD OFFICE	1335 BROADWAY OAKLAND, CALIFORNIA 94612	(415) 273-4237
⑧ DOE RICHLAND FIELD OFFICE	P.O. BOX 988 RICHLAND, WASHINGTON 99352	(509) 373-3800

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REGIONAL COORDINATING OFFICES

DOE 1540. 1A  
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Attachment 11-1  
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